

# POLICY POINTS

➤ POLICY POINTS BRINGS RELEVANT DATA TO TIMELY PUBLIC POLICY ISSUES IN ARIZONA

## Advanced Placement Courses: Access, Participation, and Outcomes in Arizona

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Advanced Placement (AP) courses offer high school students the opportunity to take rigorous, college-level classes while still in high school. The College Board's AP program supports 34 AP courses in a wide range of subjects including: Calculus, Biology, Studio Arts, World History, and a variety of foreign languages.<sup>1</sup> Participation in AP courses is widely viewed as an indicator of a student's college readiness, particularly by selective colleges and universities. Many colleges and universities offer college credit to students who receive a score of at least three out of the five possible points awarded on AP exams. Students with AP credit are often able to skip general studies courses and take courses related to their majors earlier in their college careers than students without AP credits. Recent federal and state policies have been aimed at expanding students' access to AP courses. In this brief, we examine students' access, participation, and success in AP courses in Arizona's public high schools.

### Data Sources and Methods

The sample of schools used for this analysis was drawn from the United States Department of Education's 2009-10 Civil Rights Data Collection (CRDC). All schools located in districts that served more than 3,000 students nationwide were surveyed. We selected the regular public high schools in Arizona for the analysis reported here. Because small school districts are underrepresented in the sample, the number of schools that do not offer AP courses is likely higher than we report here. Because there was only one Arizona charter school in the CRDC sample, we could not include charter schools in the analysis.

### How Widely Available Are AP Courses in Arizona?

Most of the 172 public high schools in our sample (80%) offered at least one AP course. The majority of these schools are located in cities and suburbs, and enrolled approximately 1,750 students on average. The number of AP courses these schools offered varied considerably. Sixty-four percent of the schools that offered AP courses provided between six and 15 courses, while 20% provided five or fewer.

The 34 schools that did not offer AP courses were among the smallest in our sample, with total enrollments ranging from 20 to 860 students. The majority of these schools (74%) were located in small towns and rural areas of the state, and served a substantially higher percentage of American Indian students and a lower percentage of White students than the full sample (see Table 1). Within the group of 138 schools that offered AP courses, the smallest schools in the sample also offered fewer types of AP courses. For example, while all of the largest schools offered AP mathematics and the majority (77%) offered AP science courses, just over half of the smallest schools in the sample offered AP courses in math (56%) and science (53%).



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<sup>1</sup> For a complete list, see [http://apcentral.collegeboard.com/apc/public/courses/teachers\\_corner/index.html](http://apcentral.collegeboard.com/apc/public/courses/teachers_corner/index.html)

**Table 1: Demographics of Schools and AP students**

|                 | All schools<br>(172 schools) | Schools that did not<br>offer AP courses<br>(34 schools) | Schools that offered<br>one or more AP courses<br>(138 schools) | AP students<br>(138 schools) |
|-----------------|------------------------------|--|---|------------------------------|
| American Indian | 6%                           | 11%  | 4%  | 3%                           |
| Asian American  | 3%                           | 1%   | 3%  | 6%                           |
| Black           | 6%                           | 5%   | 6%  | 5%                           |
| Hispanic        | 39%                          | 42%  | 38%   | 31%                          |
| White           | 46%                          | 41%  | 48%   | 55%                          |

Source: Authors' calculations from CRDC data; figures may not add to 100% because of rounding.

## Who Enrolls in AP Courses?

The 138 schools that offered AP courses enrolled a total of 239,540 students. Of those, 32,495 (14%) took at least one AP class. In 43% of the schools offering AP courses, 10% or fewer students enrolled in AP courses. Table 1 compares the racial demographics of schools that offered AP courses with the racial demographics of students that took one or more AP courses. On average, Asian American and White students were overrepresented in AP courses, while American Indian, Black and Hispanic students were underrepresented in AP courses.

## Are There Inequalities in Access to AP Courses?

While Table 1 suggests that on average the racial demographics of Arizona students taking at least one AP course roughly mirrored the demographics of the schools they attended, these figures mask some school-level inequalities in access to AP courses. In 37 schools, Hispanic students, the second largest demographic group attending Arizona's public schools, were underrepresented in AP courses by more than 10 percentage points. Similarly, as the total school enrollment of Hispanic, Black and American Indian students increased, the number of AP courses schools offered decreased. Conversely, when White students comprised the majority of a school's student population, the number of AP courses offered tended to increase (Table 2).

**Table 2: Schools Classified by Percent Minority Enrollment and Number of AP Courses Offered**

| Percentage Minority Students | No AP courses | Between 1 and 5 | Between 6 and 10 | Between 11 and 15 | Greater than 16 |
|------------------------------|---------------|-----------------|------------------|-------------------|-----------------|
| 25% or less                  | 18%           | 11%             | 18%              | 31%               | 48%             |
| Between 26 and 50%           | 24%           | 22%             | 35%              | 33%               | 30%             |
| Between 51 and 75%           | 32%           | 19%             | 20%              | 23%               | 17%             |
| Greater than 75%             | 26%           | 48%             | 27%              | 13%               | 4%              |
| Column Total                 | 34            | 27              | 49               | 39                | 23              |

Source: Authors' calculations from CRDC data; figures may not add to 100% because of rounding.

## AP Test Taking and Test Results

Fifty-four percent of the 32,495 students enrolled in AP courses took AP tests in at least one subject and 32% of enrolled students passed at least one AP test (see Table 3). While Hispanic students were the racial/ethnic group with the largest proportion of test takers, only 26% of the Hispanic students enrolled in AP courses passed at least one AP test. White and Asian students had lower rates of AP test taking than Hispanic students, but passed AP tests at higher rates (35% and 37% respectively). Arizona's test-taking and passing rates are well below the national average (College Board, 2011).<sup>2</sup>

<sup>2</sup> The College Board measures test taking and passing rates as a percentage of the graduating class in a given year. Nationwide, 28% of the class of 2010 took at least one AP exam in high school and 17% scored a 3 or higher on an AP exam at any point in high school. The corresponding figures for Arizona were 16% and 9%, respectively.

**Table 3: Students Classified by Test Taking and Test Results by Race**

|                 | Enrollment in AP courses | Percent tested | Percentage of enrolled students that passed one or more AP exam |
|-----------------|--------------------------|----------------|---|
| American Indian | 560                      | 21%            | 8%  |
| Asian           | 2,600                    | 52%            | 37%   |
| Hispanic        | 8,410                    | 61%            | 26%   |
| Black           | 1,495                    | 40%            | 14%   |
| White           | 19,430                   | 53%            | 35%   |
| Total           | 32,495                   | 54%            | 32%   |

Source: Authors' calculations from CRDC data; figures may not add to 100% because of rounding.

## Policy Implications

While most students have access to some AP courses, there are disparities in the number of AP courses available to students who attend small, rural, and predominantly minority schools. Although Arizona covers the cost of the AP exam for low-income students, these students need increased access to the courses that will allow them to take and be successful on these exams. Investments in rigorous curricula, course materials, and highly qualified teachers should be targeted at the communities with the highest needs.

The low participation in AP courses and test taking in the schools that offer AP courses suggests schools need to pursue policies and practices that expand access to AP courses. Conversely, schools and districts may consider conducting cost-benefit analyses to determine if the resources used to provide AP courses could be more effectively utilized to serve a broader range of students.

Hispanic students have a high test taking rate which suggests that AP courses are an important option for these students. Schools that offer AP courses should promote and support AP test taking as well as policies and programs aimed at increasing test-passing rates.

While these findings provide important information about students' access and participation in AP courses, they do not allow us to draw conclusions about how students' AP test results might be used to assess and reward teacher performance.

### Citation:

College Board. (2011). The 7th Annual AP Report to the Nation. Washington D.C.: Author.